AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) A control apparatus of an electric power steering apparatus comprising:

a motor applying a steering assist force to a steering system of a vehicle; and

a current command value calculating means for calculating a q-axis current command value Iqref controlling an output torque of the motor and a d-axis current command value Idref controlling a magnetic field of the motor,

wherein the control apparatus is provided with a current command value correcting means for calculating a corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of a rotor position θ of the motor, and controls the motor on the basis of the corrected q-axis current command value Iqc.

2. (original) A control apparatus of an electric power steering apparatus as claimed in claim 1, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of the rotor position θ of the motor and an angular velocity ω of the rotor.

3. (original) A control apparatus of an electric power steering apparatus as claimed in claim 1, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of the rotor position θ of the motor and the q-axis current value Iqref.

4. (original) A control apparatus of an electric power steering apparatus as claimed in claim 1, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a basic correcting current Ic previously determined by the rotor position θ to the q-axis current command value Iqref.

5. (original) A control apparatus of an electric power steering apparatus as claimed in claim 2, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a compensated current value (Kw·Kd·Ic) obtained by multiplying a basic correcting current Ic previously determined by the rotor position θ by a coefficient Kw determined by the angular velocity ω of the rotor to the q-axis current command value Iqref.

6. (original) A control apparatus of an electric power steering apparatus as claimed in claim 3, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a compensated current value (Kq·Kd·Ic) obtained by multiplying a basic correcting current Ic previously determined by the rotor position θ by a coefficient Kq determined by the q-axis current command value Iqref to the q-axis current command value Iqref.

7. (original) A control apparatus of an electric power steering apparatus as claimed in claim 1, wherein the current command value correcting means is constituted by a basic correcting current calculating means outputting a basic correcting current Ic previously determined by the rotor position θ, an encoding means determining and outputting a code of the q-axis current command value Iqref, and a first multiplying portion multiplying the basic correcting current Ic by a signal from the encoding means and adding to the q-axis current command value Iqref.

8. (original) A control apparatus of an electric power steering apparatus as claimed in claim 7, wherein the control apparatus is provided with a coefficient calculating means calculating a coefficient Kw on the basis of the angular velocity ω of the rotor, and a second multiplying portion multiplying the basic correcting current Ic by the coefficient Kω, and inputs an output (Kω·Ic) of the second multiplying portion to the first multiplying portion.

9. (currently amended) A control apparatus of an electric power steering apparatus as claimed in claim 7 ~~or 8~~, wherein the control apparatus is provided with a spark advance portion advancing the angular velocity ω, and an adding means adding an angular velocity

advanced by the spark advance portion to the rotor position θ, and inputs an output of the adding means to the basic correcting current calculating means.

10. (original) A control apparatus of an electric power steering apparatus comprising:

a motor applying a steering assist force to a steering system of a vehicle; and

a current command value calculating means for calculating a q-axis current command value Iqref controlling an output torque of the motor and a d-axis current command value Idref controlling a magnetic field of the motor,

wherein the control apparatus is provided with a current command value correcting means for calculating a corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of a rotor position θ of the motor and the d-axis current command value Idref, and controls the motor on the basis of the corrected q-axis current command value Iqc.

11. (original) A control apparatus of an electric power steering apparatus as claimed in claim 10, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of the rotor position θ of the motor, the d-axis current command value Idref and an angular velocity ω of the rotor.

12. (original) A control apparatus of an electric power steering apparatus as claimed in claim 10, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc obtained by correcting the q-axis current command value Iqref on the basis of the rotor position θ of the motor, the d-axis current command value Idref and the q-axis current value Iqref.

13. (original) A control apparatus of an electric power steering apparatus as claimed in claim 10, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a compensating current value (Kd·Ic) obtained by multiplying a basic correcting current Ic previously determined by the rotor position θ by a coefficient Kd determined by the d-axis current command value Idref to the q-axis current command value Iqref.

14. (original) A control apparatus of an electric power steering apparatus as claimed in claim 11, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a compensated current value (Kw·Kd·Ic) obtained by multiplying a compensating current value (Kd·Ic) obtained by multiplying a basic correcting current Ic previously determined by the rotor position θ by a coefficient Kd previously determined by the d-axis current command value Idref, by a coefficient Kw determined by the angular velocity ω of the rotor to the q-axis current command value Iqref.

15. (original) A control apparatus of an electric power steering apparatus as claimed in claim 12, wherein the current command value correcting means calculates the corrected q-axis current command value Iqc by adding a compensated current value (Kq·Kd·Ic) obtained by multiplying a compensating current value (Kd·Ic) obtained by multiplying a basic correcting current Ic previously determined by the rotor position θ by a coefficient Kd determined by the d-axis current command value Idref, by a coefficient Kq determined by the q-axis current command value Iqref to the q-axis current command value Iqref.